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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,920	01/07/2002	Wolfgang Schafer	P/2107-193	8767

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OSTROLENK FABER GERB & SOFFEN
1180 AVENUE OF THE AMERICAS
NEW YORK, NY 100368403

EXAMINER

CHO, HONG SOL

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/937,920	SCHAFFER, WOLFGANG	
	Examiner	Art Unit	
	Hong Cho	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 10/30/2006. Claims 1 and 2 were canceled. Claims 3-17 are pending in the instant application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 6-9, 12 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Vanderspool, II et al (US 5261118), hereinafter referred to as Vanderspool.

Re claims 15 and 17, Vanderspool discloses synchronizing a clock in a transmission station with a clock in a control station (*synchronizing a remote clock with a central clock*, abstract). Vanderspool discloses a control station with a master clock and transmission stations with a clock connected over a satellite link (*providing a central clock and a remote clock at separate locations, connecting the central clock and the remote clock via a bi-directional, two-way satellite communication link*, figure 1). Vanderspool discloses a comparator used for a time adjustment factor in each of the central clock and the remote clock (*the central clock and the remote clock determining*

measurement data, figure 1, elements 28 and 40) by measuring the time difference determined by the central clock between the time of reception of the signal transmitted by the satellite from the remote other clock and the time of the central clock receiving the signal transmitted by the satellite (column 3, lines 27-32) and determined by the remote clock between the time of reception of the signal transmitted by the satellite from the central clock and the time of the remote clock receiving the signal transmitted by the satellite (column 3, lines 61-66). Vanderspool discloses synchronizing the remote clock in state and rate to the central clock based on the measurement data and also on system related corrections exchanged by the signals transmitted between the central and remote clocks (column 4, lines 18-20).

Re claims 6 and 17, Vanderspool discloses a central clock having a first bi-directional, two-way satellite communication link for the central clock and further comprising a first transmitting device for transmitting a signal to a satellite and a first receiving device for receiving a signal from a satellite (figure 1, elements 24 and 26) and a remote clock separated from the central clock having a second bi-directional, two-way satellite communication link for the remote clock and further comprising a second transmitting device for transmitting a signal to a satellite and a second receiving device for receiving a signal from a satellite (figure 1, elements element 38).

Re claims 7-9, Vanderspool discloses connecting a remote ground station to a redundant system of the central clock via a multiplex method (column 2, line 19-21).

Re claim 12, Vanderspool discloses calculating time correlation factor in digital form (column 4, lines 45-55).

Re claim 14, Vanderspoo discloses receiving a system timing signal from a remote station (*the respective state of the remote clocks in the for of telemetry data at the central clock*, column 2, line 67 to column 3, line 2).

Re claim 16, Vanderspoo discloses periodically resynchronizing the remote clock to the central clock (*synchronizing the remote clock by operating a control loop in the remote clock*, column 4, lines 18-20).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderspoo in view of Malkamaki et al (US 5577024), hereinafter referred to as Malkamaki.

Re claims 3-5, Vanderspoo discloses all of the limitations of the base claim, but fails to disclose connecting the remote ground station to the central clock via FDMA, CDMA, or TDMA. Malkamaki discloses transmitting information by using FDMA, TDMA, or CDMA (column 9, lines 1-5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Vanderspoo to use different multiple access schemes of Malkamaki in connecting the remote ground station

to the central clock so that a particular multiple access scheme would be employed to provide the following benefit: CDMA would allow numerous signals to occupy a single transmission for optimizing the use of available bandwidth. TDMA would increase the amount of data that can be carried by dividing each cellular channel into three time slots. FDMA would allow a single base station to serve many callers by dividing a radio frequency into several channels by splitting the frequency band into distinct segments, which are assigned to various callers.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderspoo in view of Zenick et al (US 6128469), hereinafter referred to as Zenick.

Re claim 10, Vanderspoo discloses all of the limitations of the base claim, but fails to disclose locating a transparent transponder on board the satellite. Zenick discloses locating a transparent transponder on board the satellite (column 7, lines 4-7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vanderspoo to locate a transparent transponder on board the satellite to obviate the need for storage and controller within the satellite.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderspoo in view of Wiedeman et al (US 5884142), hereinafter referred to as Wiedeman.

Re claim 11, Vanderspoo discloses all of the limitations of the base claim, but fails to disclose locating a regenerative transponder on board the satellite. Wiedeman

discloses locating a regenerative transponder on board the satellite (column 7, lines 4-7). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vanderspool to locate a regenerative transponder on board the satellite to increase performance with the help of a demodulator and modulator (column 24, lines 16-20).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderspool in view of Witsaman et al (US 5416808), hereinafter referred to as Witsaman.

Re claim 13, Vanderspool discloses all of the limitations of the base claim, but fails to disclose supplying a user with a warning signal if the deviation of the remote clock with respect to the central clock exceeds a limit value. Witsaman discloses resetting a counter if the difference between the counter time and the reference time is outside the tolerance value (column 9, line 67 to column 10, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vanderspool by adding to it the feature of notifying a user with a signal to reset the counter for larger adjustment.

Response to Arguments

6. Applicant's arguments with respect to claims 3-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho
Patent Examiner
1/19/07

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